The embodiments of the invention for which as exclusive privilege and property right is claimed are defined as follows.

1. A method for detection of hydrocarbon deposits onshore by measuring infrasonic spectral characteristics of microseismic noise of the earth in a selected area, the steps comprising:

placing at least one receiver of seismic vibrations capable of recording at least one data component within a 2 to 5 Hz frequency range over an expected hydrocarbon deposit onshore in the selected area;

registering at least once the spectral characteristics of the microseismic noise of the earth within the 2 to 5 Hz at at least one point on the selected area as a passive information signal; and

measuring the presence of a spectral anomaly on a spectrum of the passive information signal relative a spectrum of an information signal from an area known not to contain hydrocarbon deposits.

2. The method of claim 1 wherein the passive information signal is recorded for up to 60 minutes.

3. The method of claim 1 wherein at least two receivers of the seismic vibrations are used and placed at a distance to each other of up to 500 meters.

4. The method for detection of hydrocarbons deposits onshore by measuring infrasonic spectral characteristics of microseismic noise of the earth in a selected area, the steps comprising:

placing at least one receiver of seismic vibrations capable of recording at least one data component within a 2 to 5 Hz frequency range over an expected hydrocarbon deposit onshore in the selected area;

generating seismic vibrations using a vibrator;

registering at least once the spectral characteristics of the microseismic noise of the earth within the 2 to 5 Hz at at least one point on the selected area before the generating of the seismic vibrations as a passive information signal and during the generating of the seismic vibrations as an active information signal; and

measuring the presence of a spectral anomaly on a spectrum of the active information signal relative to the spectrum of the passive information signal.

5. The method of claim 4 wherein the passive information signal is recorded for up to 20 minutes before the generation of seismic vibrations.

6. The method of claim 4 wherein the generation of seismic vibrations is for at least 3 minutes.

7. The method of claim 4 wherein at least two receivers of the seismic vibrations are used and placed at a distance to each other of up to 500 meters.

8. The method of claim 7 wherein the at least two receivers of the seismic vibrations are placed at a distance of up to 500 meters from the vibrator.

9. A method for detection of hydrocarbon deposits offshore by measuring infrasonic spectral characteristics of microseismic noise of the earth in a selected area, the steps comprising:

placing on a sea bottom at least one receiver of seismic vibrations capable of recording at least one data component within a 2 to 5 Hz frequency range over an expected hydrocarbon deposit;

registering at least once the spectral characteristics of the microseismic noise of the earth within the 2 to 5 Hz at at least one point on the sea bottom as a passive information signal; and

measuring the presence of a spectral anomaly on a spectrum of the passive information signal relative a spectrum of an information signal from an area known not to contain hydrocarbon deposits.

10. The method of claim 9 wherein the passive information signal is recorded for at least 40 minutes.

11. The method of claim 9 wherein at least two receivers of the seismic vibrations are used and placed at a distance to each other of up to 500 meters.

12. The method for detection of hydrocarbon deposits offshore by measuring infrasonic spectral characteristics of microseismic noise of the earth in a selected area, the steps comprising:

placing on a sea bottom at least one receiver of seismic vibrations capable of

recording at least one data component within a 2 to 5 Hz frequency range over an expected hydrocarbon deposit;

generating seismic vibrations;

registering at least once the spectral characteristics of the microseismic noise of the earth within a 2 to 5 Hz frequency range at at least one point on the sea bottom before the generating of the seismic vibrations as a passive information signal and during the generating of the seismic vibrations as an active information signal; and

measuring the presence of a spectral anomaly on a spectrum of the active information signal relative to a spectrum of the passive information signal.

13. The method of claim 12 wherein the passive information signal is recorded for at least 10 minutes before the generation of seismic vibrations.

14. The method of claim 12 wherein at least two receivers of the seismic vibrations are used and placed at a distance to each other of up to 500 meters.

15. The method of claim 14 wherein the at least two receivers of the seismic vibrations are placed at an equal distance from the source of seismic vibrations.

16. The method of claim 12 wherein the generation of seismic vibrations is for at least 5 minutes.

17. A method for monitoring a producing oil and gas field by measuring infrasonic spectral characteristics of microseismic noise of the earth: the steps comprising:

placing at least one receiver of seismic vibrations capable of recording at least one data component within a 2 to 5 Hz frequency range over a producing hydrocarbon deposit at control points;

periodically recording as an information signal the spectral characteristics of the microseismic noise of the earth within 2 to 5 Hz at the control points, and

detecting an edge of the hydrocarbon deposit at a control pint at which the spectral anomaly relative to a spectrum from an area known not to contain hydrocarbons disappears.

18. The method as described in claim 17 wherein the passive information signal is recorded in a range of 40 to 60 minutes.

19. The method as described in claim 17 wherein the information signal is recorded before and during the generation of seismic vibrations.

20. The method as described in claim 19 wherein the seismic vibrations are generated for at least 3 minutes.

21. A method for monitoring fill levels of subsurface gas storage by measuring infrasonic spectral characteristics of microseismic noise of the earth, the steps comprising:

placing receivers of seismic vibrations capable of recording at least one data component within a 2-5 Hz frequency range at surface control stations, which approximately define the fill levels of the gas storage;

during gas storage operation, periodically recording as an information signal the spectral characteristics of microseismic noise of the earth within 2 to 5 Hz at each control station; and

measuring an absence of a spectral anomaly relative to a spectrum recorded outside of the gas storage, to determine if there is gas below each control station.

22. The method as described in claim 21 wherein the information signal is recorded in a range of 40 to 60 minutes.

23. The method as described in claim 21 further including the step of generating seismic vibrations for at least 3 minutes.

24. The method as described in claim 23 wherein the information signal is recorded before and during the generation of the seismic vibrations.